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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,482	10/13/2000	Richard Derose	PH 97089	3435

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EXAMINER
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MARX, IRENE

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 07/10/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/582,482

Applicant(s)

DEROSE ET AL.

Examiner

Irene Marx

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,6-8,12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-4, 6-8 and 12-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                            | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other:  |

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The application should be reviewed for errors. error occurs, for example in the specification in the recitation at page 3, lines 2-3 "in which such oxidase [lacuna] responsible for a step in tyrosine catabolism...".

The amendment filed 6/9/03 is acknowledged. Claims 1, 3-4, 6-8 and 12-13 are being considered on the merits.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-4, 6-8 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is vague and indefinite in the recitation of "in the presence of a... HPPD inhibitor", since it is doubted that in the "presence" of large amounts of any inhibitor the reaction would succeed. The specification suggests that 100  $\mu$ M are used (Specification, page 8, line 9.) It is also recommended that the amount of inhibitor and of enzymes to be used be better defined. For example, that the amount of enzyme be defined with a phrase, such as, --in an effective amount of ... to prepare homogentisate--.

***Response to Arguments***

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

Claim 13 remains confusing in that "biological organisms" appears redundant. Applicants argue that this phrase is correct. However, the basis for the argument is not clearly set forth. It does not appear that there are "organisms" that are not "biological".

Also, from the context of a "suitable reaction medium", it appears that the proper term should be "suitable microorganisms", since organisms such as animals appear excluded by the claims. See also Specification, page 4.

Applicants arguments directed to the amounts of enzyme are noted. However, specific amounts were not suggested, merely a functional languages such as "--in an amount effective... to prepare homogentisate--", for example.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-4, 6-8 and 12-13 are/remain rejected under 35 U.S.C. 103(a) as being unpatentable over Suemori *et al.* (1995) taken with Blakley *et al.*, Suemori *et al.* (1996) and Hareland *et al.* for the reasons as stated in the last Office action and the further reasons below.

### ***Response to Arguments***

Applicant's arguments have been fully considered but they are not deemed to be persuasive.

Applicants contend that because the Suemori references do not disclose a specific enzyme that catalyzes the conversion of HPP to HPA there is no desirability to substitute enzymes from other microorganisms. However, inasmuch as the initial substrate is bioconverted to homogentisate, it is clear that the *Rhodococcus* has enzymes suitable for the process whether they are explicitly identified or not. Similarly, Hareland discloses the enzymes from *Pseudomonas* for this purpose and Blakley *et al.* disclose at least an enzyme from *Arthrobacter*. One of ordinary skill in this art would have had a compelling motivation to substitute one microorganism and/or enzyme for another with a reasonable expectation of success in carrying out the bioconversion to homogentisate from 4-hydroxyphenyl pyruvate. The present process does not require the use of any particular, isolated or purified "suitable" enzymes. It is also noted that applicants acknowledge at page 3 of the specification that HPA-hydroxylase is obtainable from many microbial sources, including those of claim 7. As noted, the enzyme HPP oxidase is similarly obtained from *Arthrobacter*. (Specification, Example 1). Thus applicant's arguments are without merit.

Counsel also contends that Hareland does not set forth any HPPD inhibitors as required by the claimed invention. Yet the arguments by counsel in this regard have not been substantiated with appropriate evidence. It is well settled that arguments by counsel do not

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constitute evidence. Inasmuch as all that is required is the presence of an HPPD inhibitor, it cannot be reasonably concluded that that at some concentration the compounds of Table 3 of Hareland do not act to inhibit HPPD, particularly in the absence of objective evidence to the contrary. The Applicants disclose herbicidal compounds as HPPD inhibitors is not limiting and does not mean that other compounds do not act in this capacity, at least to some extent.

Therefore the rejection is deemed proper and it is adhered to.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Marx whose telephone number is (703) 308-2922. The examiner can normally be reached on Monday through Friday from 6:30 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743. The appropriate fax phone number for the organization where this application or proceeding is assigned is before final (703) 872-9306 and after final, (703) 872-9307.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service whose telephone number is (703) 308-0198 or the receptionist whose telephone number is (703) 308-1235.

  
Irene Marx  
Primary Examiner  
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